

REMARKS

Applicants submit these amendments with a Request for Continued Examination in view of the Advisory Action mailed December 2, 2005, in which the Examiner stated that the response filed on October 27, 2007 did not place the application in condition for allowance.

Having amended claims 1, 12, 13, 16 and 25, claims 1-16 and 18-35 are currently pending in the present application. Applicant believes no issues of new matter should arise and entry of the amendment is respectfully requested.

In the Advisory Action dated December 2, 2005, the Examiner accepted the request for reconsideration but indicated it did not place the application in condition for allowance because the explanation of "time scaling," as understood by the Examiner may constitute a rejection under 35 U.S.C. 102 as being unpatentable over Goldman et al. U.S. Appl. No. 2002/0128805 ("Goldman"). Applicant respectfully traverses Examiner's interpretation of the term "time scaling" and provides an explanation of the term supported by appropriate reference to "Feedback Control of Dynamic Systems," Fourth Edition by Gene F. Franklin, J. David Powell, and Abbas Emami-Naeini ("Franklin"), (pertinent portions attached herewith).

Applicant respectfully submits that the term "time scaling," as claimed in the present invention, is not disclosed in Goldman. Examiner interprets the term "time scaling" to include merely data regression or linearization. Linearization is the process of finding a linear model that approximates a nonlinear model. When magnitudes of variables in nonlinear models are different, it is routine to scale the variables so that all variables have similar magnitudes. In the present invention, time scaling includes similar scaling of collected data "to make the collected data a linear function of time," as recited in claim 1. Such scaling of variables results in numerical values that falls within a narrow-enough range of magnitude to minimize errors and allow for ease of computation. One type of time scaling is where units of time are changed to ease the computation strain when a dynamic system is either extremely fast or extremely slow. (See Franklin, Pages 68-69, 75-78) For example, if a new time scale is defined to be

$$\tau = \omega_0 t$$

such that, if  $t$  is measured in seconds and  $\omega_o = 1000$ , then  $\tau$  will be measured in milliseconds.

The effect of time scaling is to change the differentiation so that

$$\dot{x} = \frac{dx}{dt} = \frac{dx}{d(\tau/\omega_o)} = \omega_o \frac{dx}{d\tau} ,$$

and

$$\ddot{x} = \frac{d^2x}{dt^2} = \omega_o^2 \frac{d^2x}{d\tau^2} . \text{ (See Franklin, Page 75)}$$

As such, Goldman does not disclose time scaling as disclosed in the claimed invention. Applicant has provided a specific example to explain this term of art.

In view of the explanation presented above, the Applicant respectfully submits that claims 1-16 and 18-35 are allowable, and respectfully requests an early and favorable reconsideration and allowance.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees, which may be required for this Amendment, or credit any overpayment to deposit account no. 08-0219.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to deposit account no. 08-0219.

Respectfully submitted,  
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